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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,279	04/04/2006	Hiraku Akiho	09792909-6676	6663
26263 7590 09/15/2009 SONNENSCHN NATH & ROSENTHAL LLP P.O. BOX 061080 WACKER DRIVE STATION, WILLIS TOWER CHICAGO, IL 60606-1080				
EXAMINER				
TRAN, CHUC				
ART UNIT		PAPER NUMBER		
2821				
MAIL DATE		DELIVERY MODE		
09/15/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/595,279

**Applicant(s)**

AKIHO ET AL.

**Examiner**

CHUC D. TRAN

**Art Unit**

2821

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3, 7, 12, 15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3, 7, 12, 15, 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments filed 2/17/09 have been fully considered but they are not persuasive.

Applicants argue in Remarks, page 4 that the patent by Takahashi fails to teach a magnetic core member for an antenna module, stacked with an antenna coil having a loop-shape, where the member has a first surface facing the antenna coil, the first surface has a recess having an annular shape formed in a region of the first surface corresponding to the loop-shape of said antenna coil, where the recess comprises a plurality of dimples formed on the first surface as claimed in each of independent claims 3, 5, and 13. The Examiner respectfully disagrees. The patent by Takahashi clearly teach a magnetic core member (4) for an antenna module (1) (Fig. 1, Col. 4, Line 44) stacked with an antenna coil (12) having a loop-shape (Fig. 1), where the member (magnetic core member (46) has a first surface (46a) facing the antenna coil (12) (Fig. 11) (same magnetic core member structure in Fig. 1), the first surface of the member has a recess (core member binder) (30) (Fig. 11, Col. 12, Line 38) having an annular shape formed in a region (Col. 13, Line 37) of the first surface corresponding to the loop-shape of said antenna coil (12) (Fig. 1, Col. 13, Line 33-39), where the recess comprises a plurality of dimples formed on the first surface (46a) (Fig. 11).

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 3, 7 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Takahashi et al (USP. 7,405,709).

Regarding claim 3, Takahashi disclose a magnetic core member (4) for an antenna module (1) in Fig. 1 and 11 (same magnetic core structure), said member (46) (Fig. 11) being stacked with an antenna coil (12) having a loop-shape (Fig. 1) (same structure), said member (46) having a first surface (46a) facing said antenna coil (12) (Fig. 11), said recess (core member binder) (30) (Fig. 11, Col. 12, Line 38) (same magnetic core member structure in Fig. 1) formed into an annular shape sheet (Col. 13, Line 37) formed in a region of the first surface (46a) corresponding to the loop-shape of said antenna coil (12) (Fig. 11, Col. 13, Line 33-39), wherein said recess comprises a plurality of dimples formed on the first surface (46a) of said member (magnetic core member (46)) (Fig. 11).

Regarding claim 7, Takahashi disclose an antenna module (1) in Fig. 1 and 11 (same antenna structure), comprising: an antenna coil (12) having a loop-shape (Fig. 1), and a base (2) on which said antenna coil (12) is positioned (Fig. 11), said base (2) being stacked with a magnetic core member (46) (Fig. 11), said core member (46) having a first surface (46a) facing the base (2) (Fig. 11), said first surface having a recess (sheet) (30) (Fig. 11), said recess having an annular shape formed in a region of the first surface (Col. 13, line 37), wherein said recess (30) comprises a plurality of dimples formed on the first surface (46a) of said core member (46) (Fig. 11).

Regarding claim 15, Takahashi disclose a portable information terminal in Fig. 1, 3 and

11 having a housing (terminal body) (21) (Fig. 3) including therein a base (substrate) (2) for supporting a loop-shaped antenna coil (12) (Fig. 3 and 11), a magnetic core member (46) stacked on said base (2) (Fig. 11), and a metal shield plate (3) stacked on said magnetic core member (46) (Fig. 11), said magnetic core member (46) having a first surface (46a) facing the base (2) (Fig. 11), said first surface (46a) having a recess (annular sheet) (30) having an annular shape formed in a region of the first surface (Fig. 11, Col. 13, Line 33-37), wherein said recess (30) comprises a plurality of dimples formed on the first surface (46a) of said core member (46a) (Fig. 11).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi in view of Endo et al (US 2005/0162331).

Regarding claims 12 and 17, Takahashi disclose the antenna module comprising the magnetic core member (46) (Fig. 11) is formed as a sheet (Takahashi, Col. 13, Line 33-38) by dispersing magnetic powder (31) of Fe--Si--Al (Takahashi, Col. 5, Line 48) except Fe--Si--Cr. Endo disclose the magnetic powder is Fe--Si--Cr (Endo, [0048]). It would have been obvious to incorporate the teaching of Endo into the teaching of Takahashi for restricting a variance of a resonating frequency in order to reduce an eddy current loss of Takahashi would have been obvious to one of ordinary skill.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUC D. TRAN whose telephone number is (571)272-1829. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chuc D Tran/  
Examiner, Art Unit 2821

/Douglas W Owens/  
Supervisory Patent Examiner, Art Unit 2821  
September 12, 2009